

# KIC 005479717

## Q1-17 DR25 TCE Parameters

TCE	Run Type	KOI?	Period (Days)	Epoch (BKJD)	Depth (ppm)	Duration (Hours)	MES	SNR	$R_{\star}$ ( $R_{\odot}$ )	$T_{\star}$ (K)	$R_p$ ( $R_{\oplus}$ )	$S_p$ ( $S_{\oplus}$ )
005479717-01	OBS	3962.01	0.697973	132.160681	3649.4	2.215	430.9	155.0	0.69	5176	4.42	1569.43

## Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005479717-01	OBS	FP	0.00	0	1	1	0	MOD_SEC_DV—MOD_SEC_ALT—CENT_UNRESOLVED_OFFSET—HALO_GHOST

**Notes:** OBS = Observed. INJ = Injected. INV = Inverted. SCR = Scrambled.

N = Not Transit-Like. S = Stellar Eclipse. C = Centroid Offset. E = Ephemeris Match.

See [http://exoplanetarchive.ipac.caltech.edu/docs/API\\_kepcandidate\\_columns.html#proj\\_disp\\_col](http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col) for comment definitions.

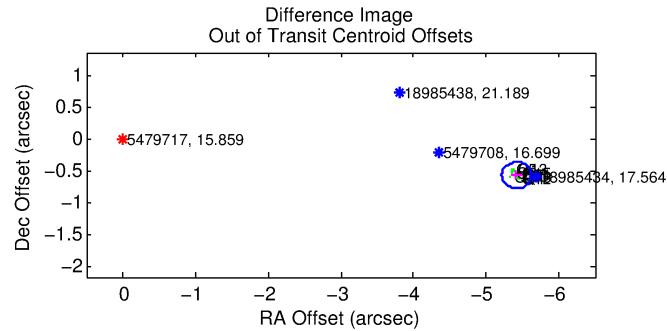
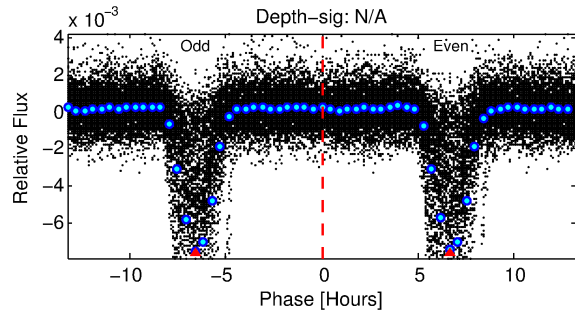
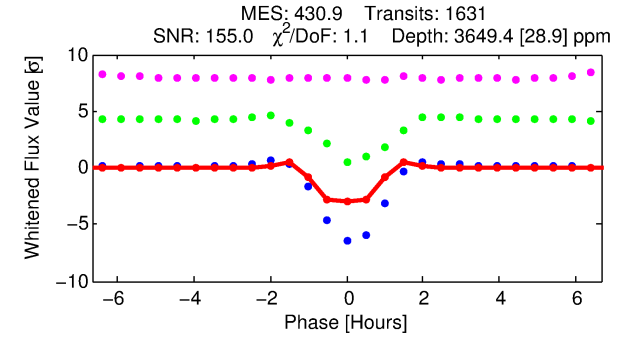
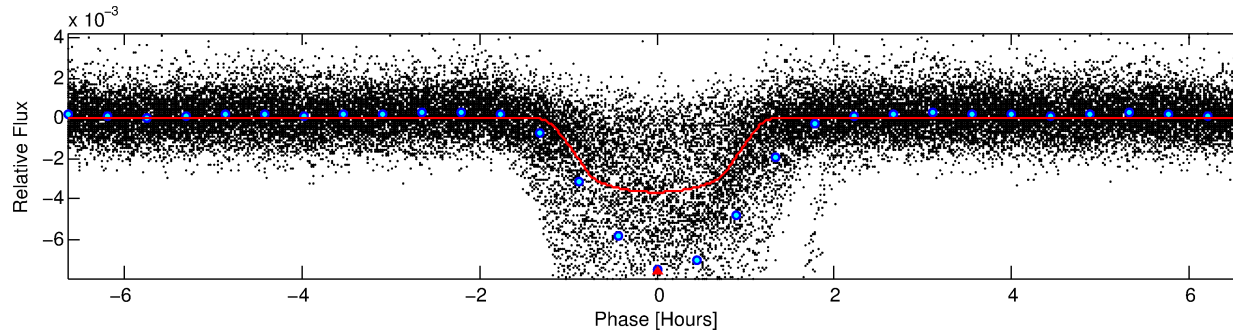
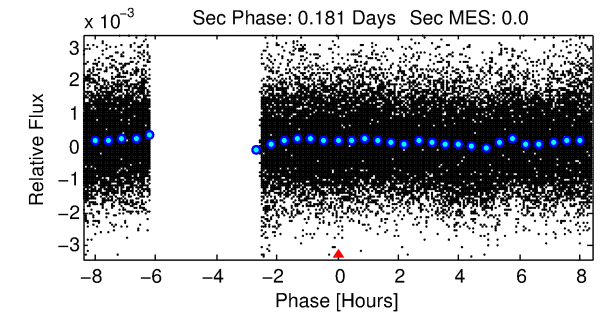
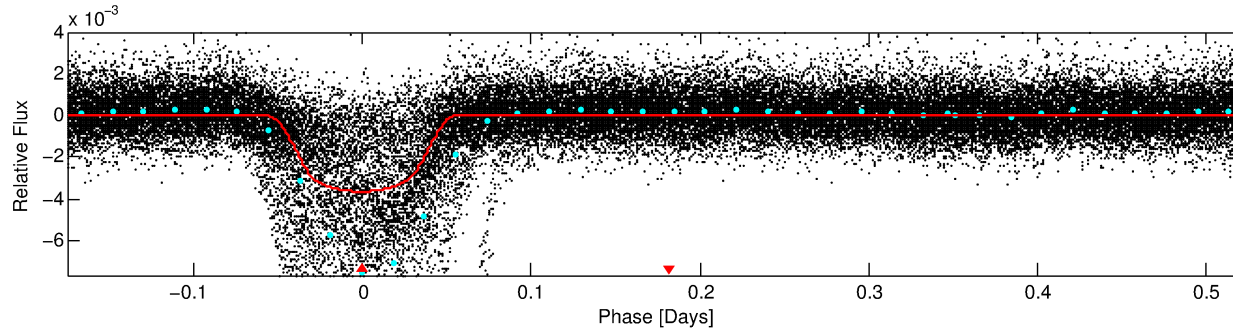
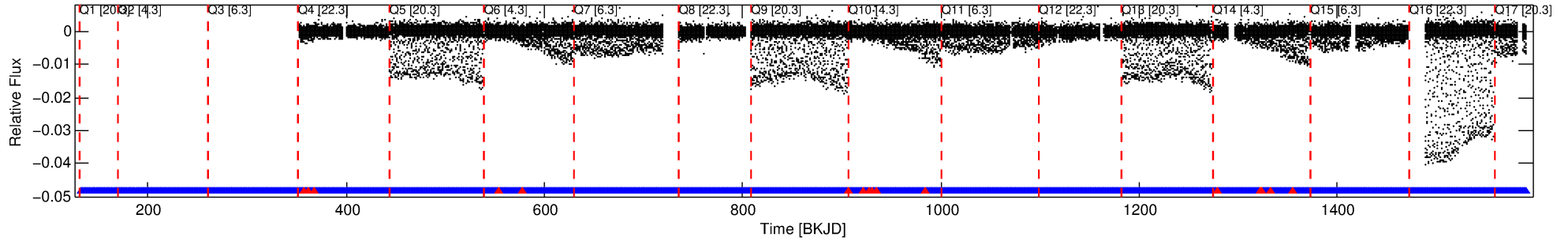
## Ephemeris Match Information For 005479717-01

No Significant Match Found

# DV One-Page Summary

KIC: 5479717 Candidate: 1 of 1 Period: 0.698 d  
KOI: K03962.01 Corr: 0.756

Kp: 15.86 R\*: 0.69 Rs Teff: 5176.0 K Logg: 4.64 Fe/H: -0.360



## DV Fit Results:

Period = 0.69797 [0.00000] d  
Epoch = 132.1607 [0.0001] BKJD  
Rp/R\* = 0.0583 [0.0023]  
a/R\* = 2.16 [0.25]  
b = 0.65 [0.13]  
Seff = 1569.43 [329.30]  
Teq = 1605 [84] K  
Rp = 4.42 [0.64] Re  
a = 0.0141 [0.0016] AU  
Ag = N/A  
Teffp = N/A

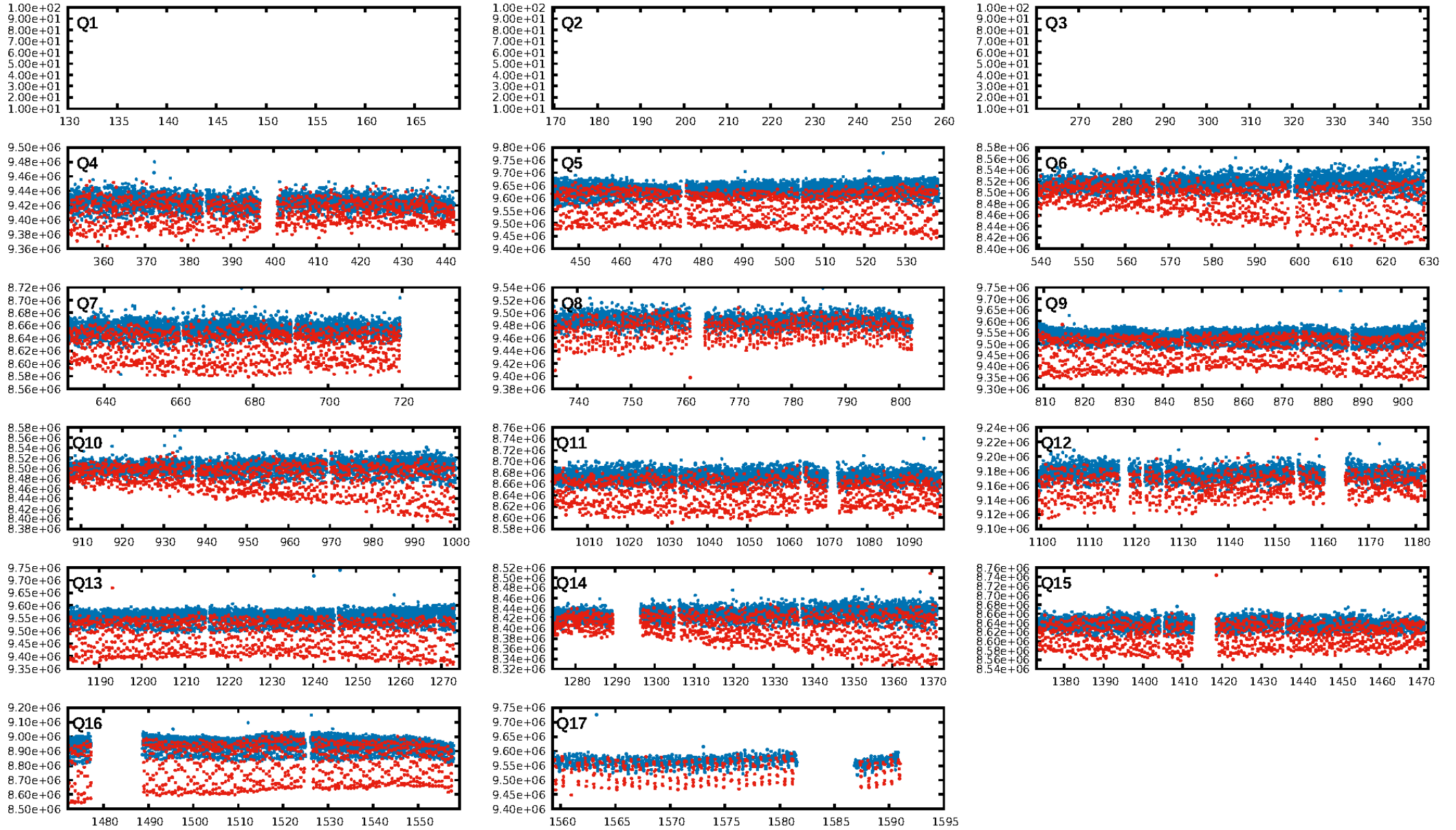
## DV Diagnostic Results:

ShortPeriod-sig: N/A  
LongPeriod-sig: N/A  
ModelChiSquare2-sig: N/A  
ModelChiSquareGof-sig: N/A  
Bootstrap-pfa: N/A  
RollingBand-figt: 0.99 [1577/1593]  
GhostDiagnostic-chr: -0.06505  
Centroid-sig: 0.0%  
Centroid-so: 36.507 arcsec [565.78σ]  
OotOffset-rm: 5.444 arcsec [79.97σ]  
KicOffset-rm: 5.794 arcsec [84.20σ]  
OotOffset-st: 0/3/4/4 [11]  
KicOffset-st: 0/3/4/4 [11]  
DiffImageQuality-fgm: 1.00 [11/11]  
DiffImageOverlap-fno: 1.00 [14/14]

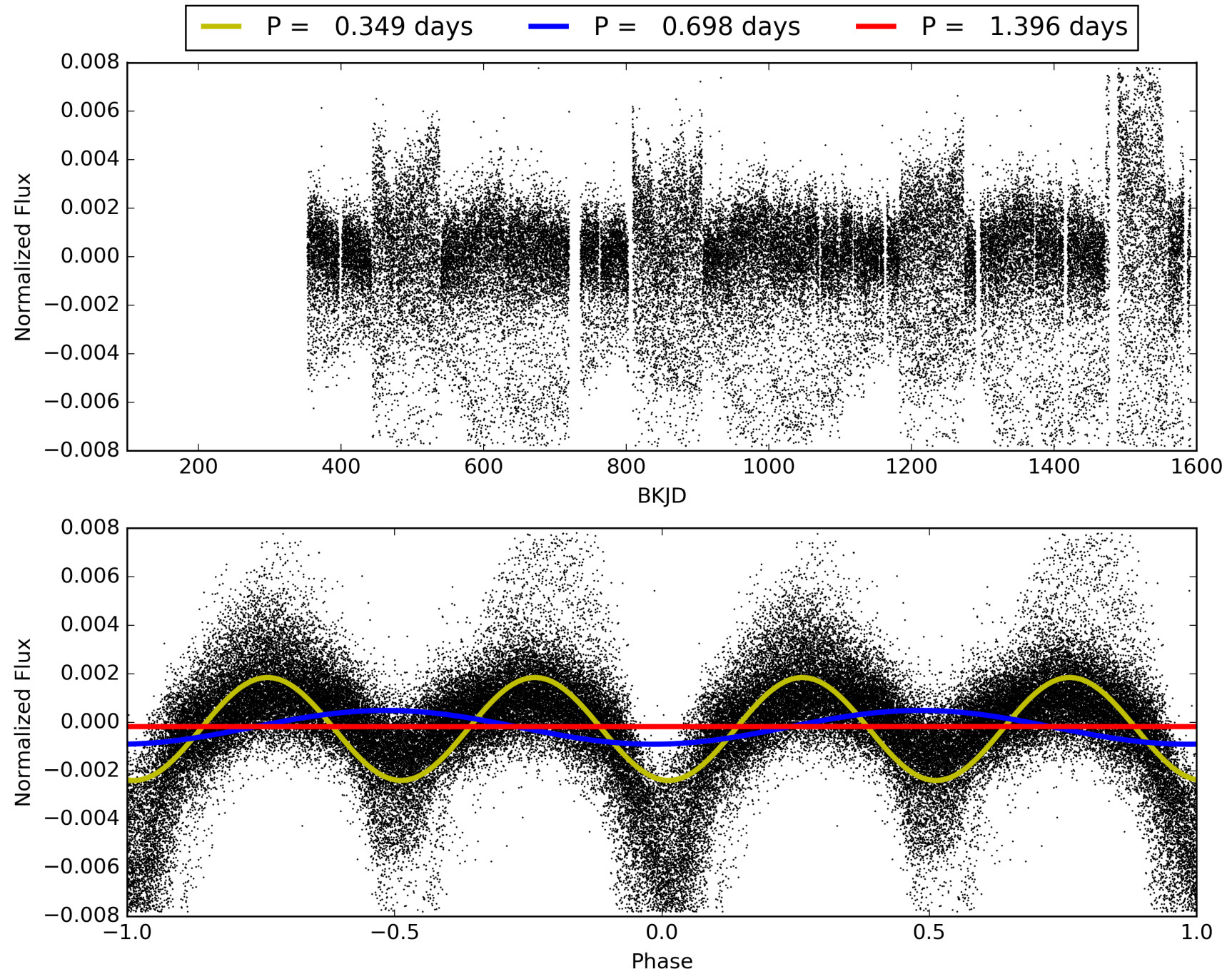
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 17:48:53 Z

This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

# TCE 005479717-01, PDC Light Curves

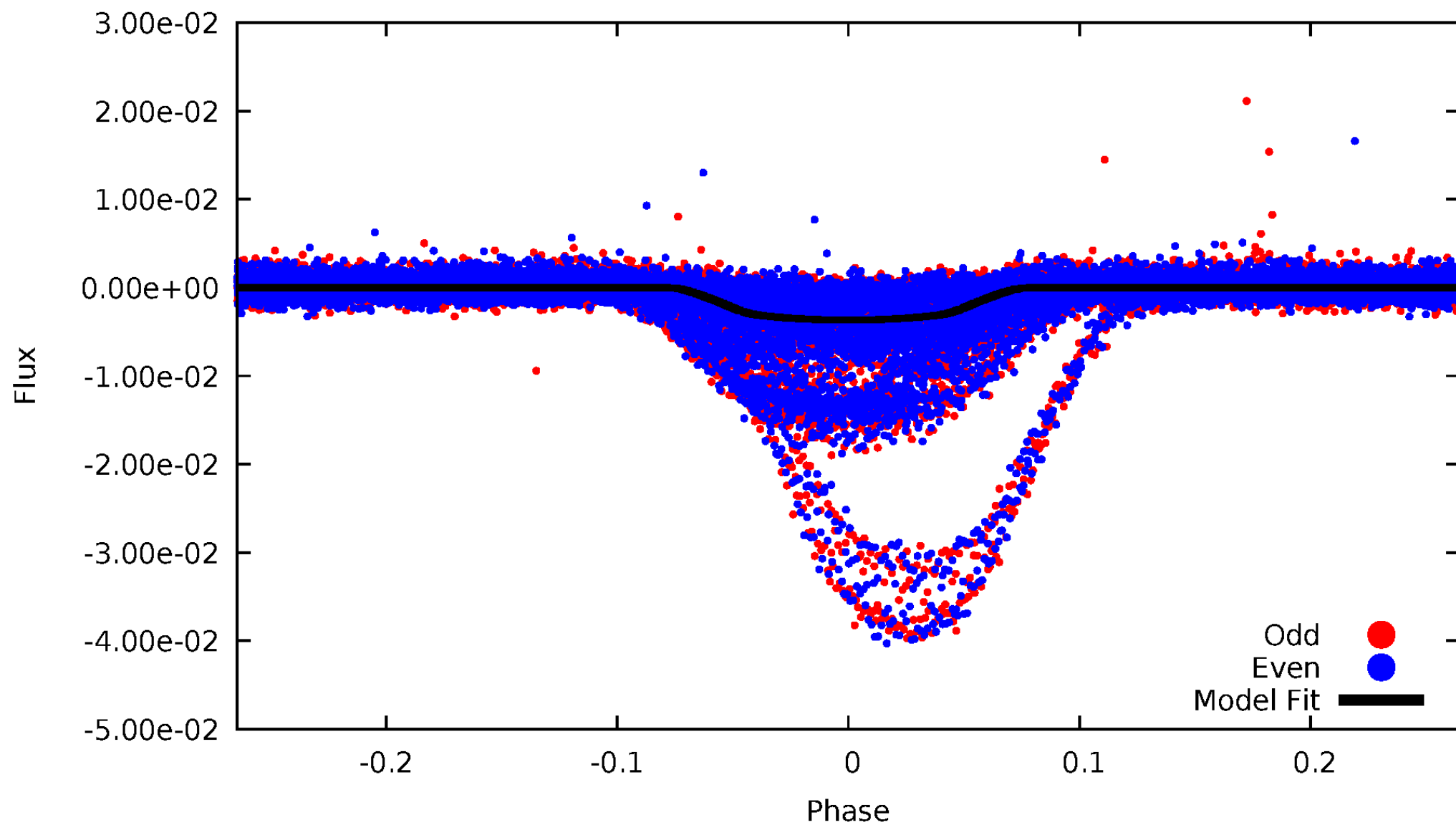


TCE 005479717-01



# DV Odd/Even

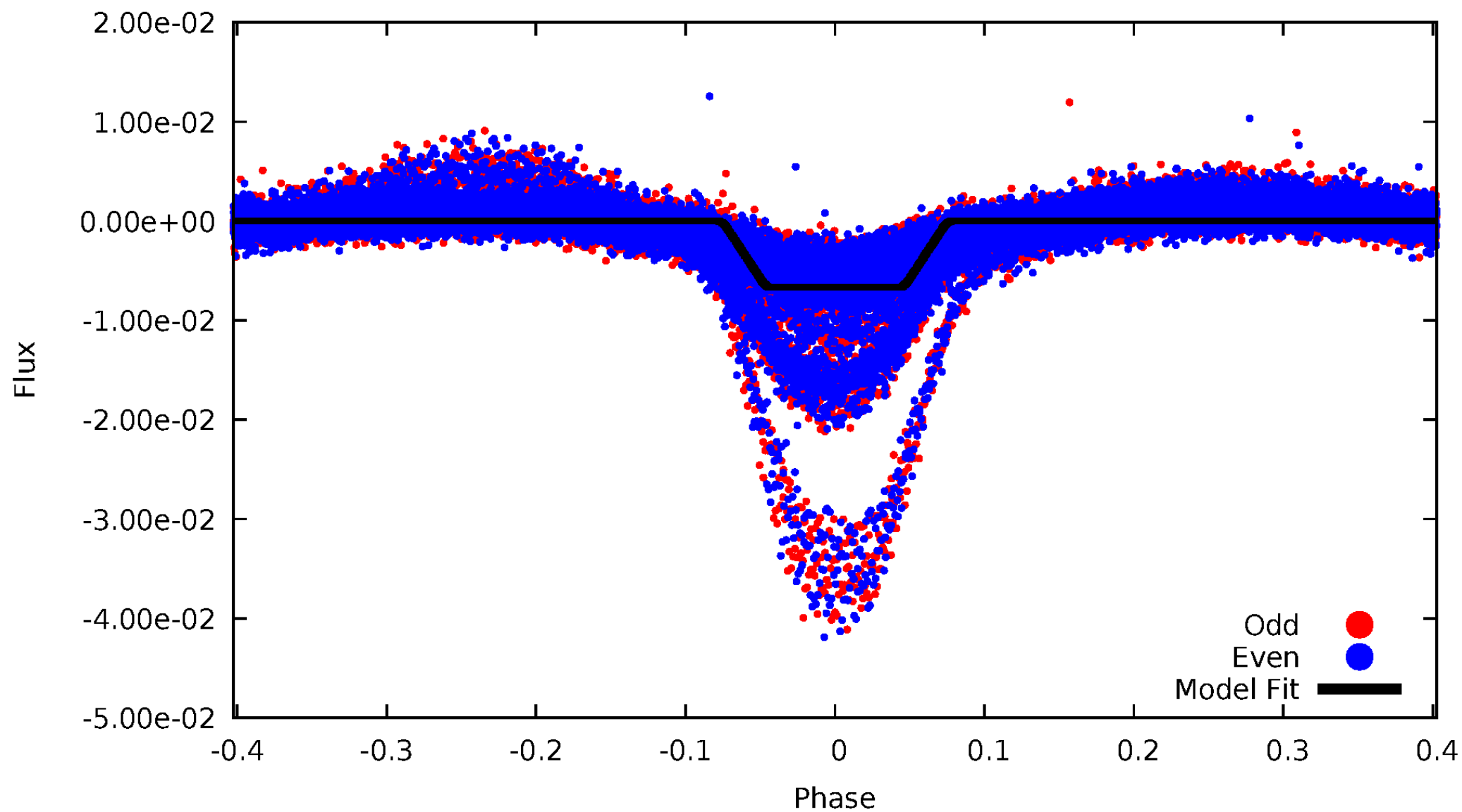
TCE 005479717-01





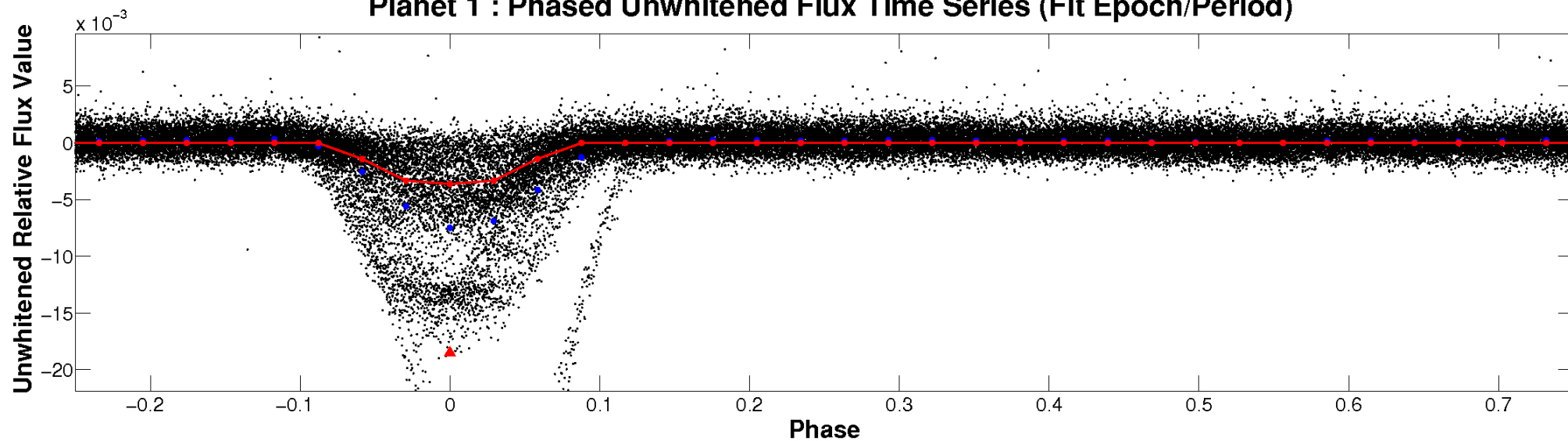
# ALT Odd/Even

TCE 005479717-01

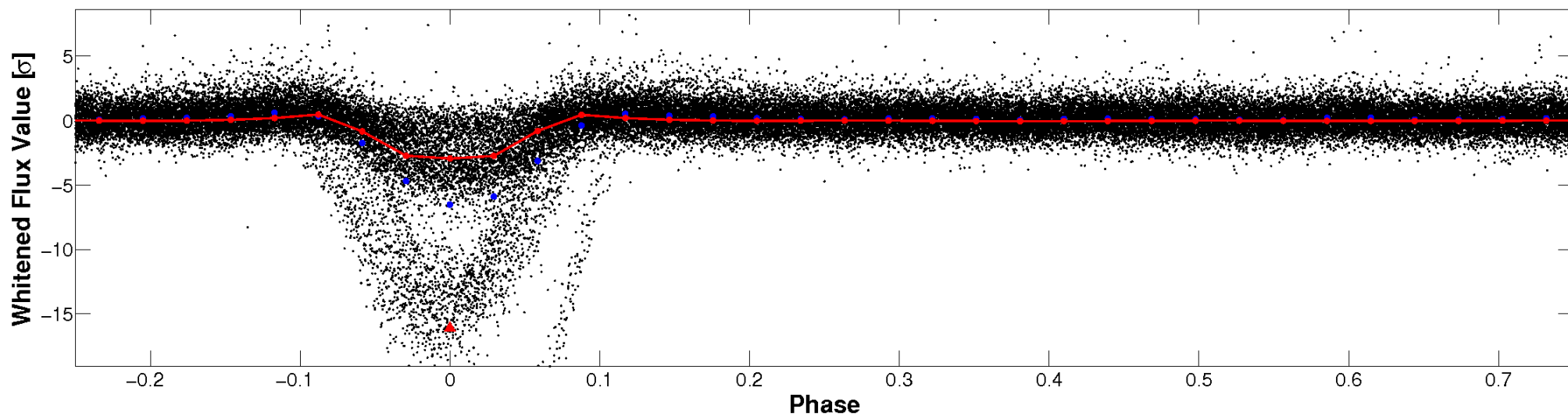


# Non-Whitened Vs. Whitened Light Curve

**Planet 1 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)**

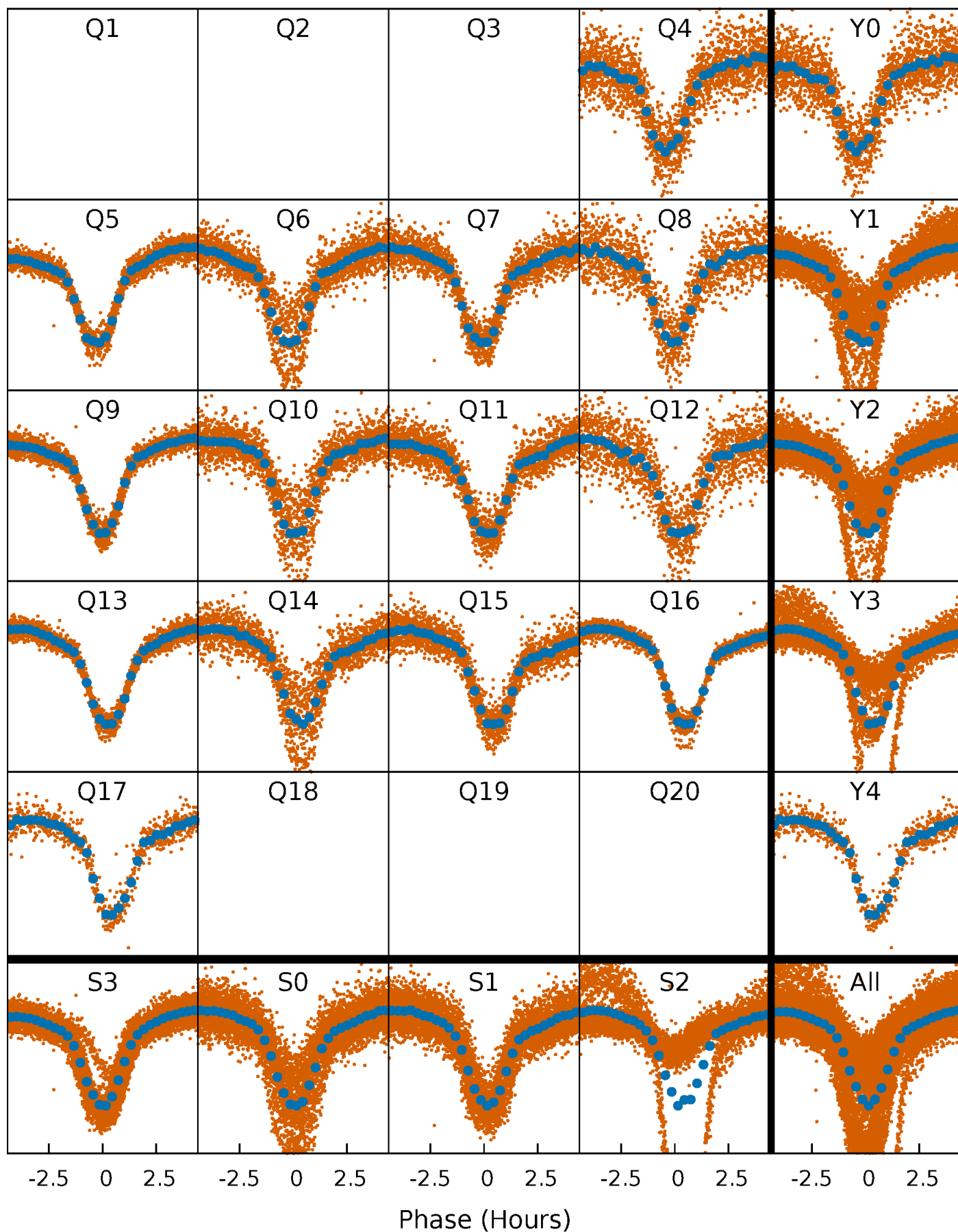


**Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)**



# PDC Quarter-Phased Transit Curves

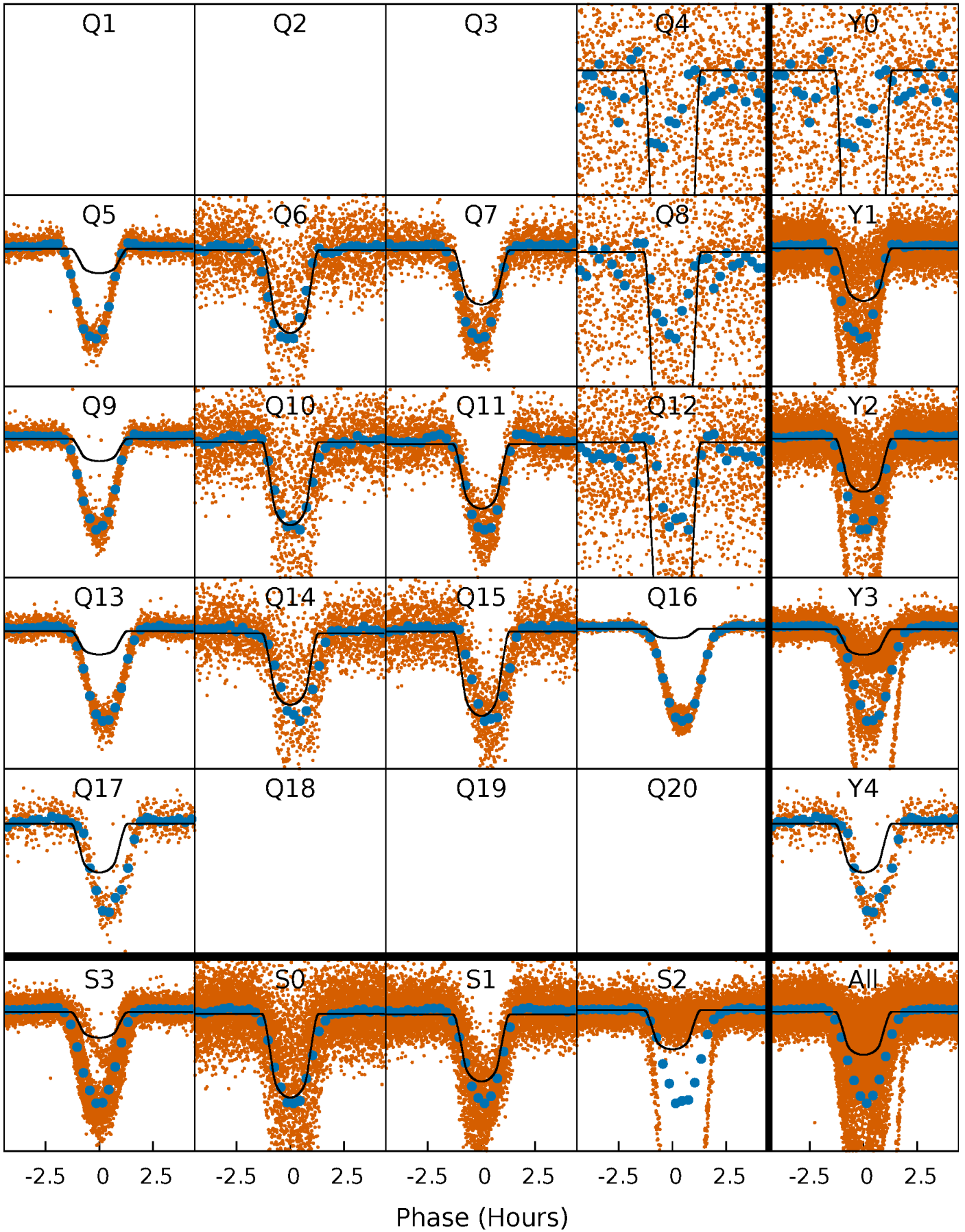
TCE 005479717-01 P= 0.697973 Days  $T_0=132.160681$  (BKJD)





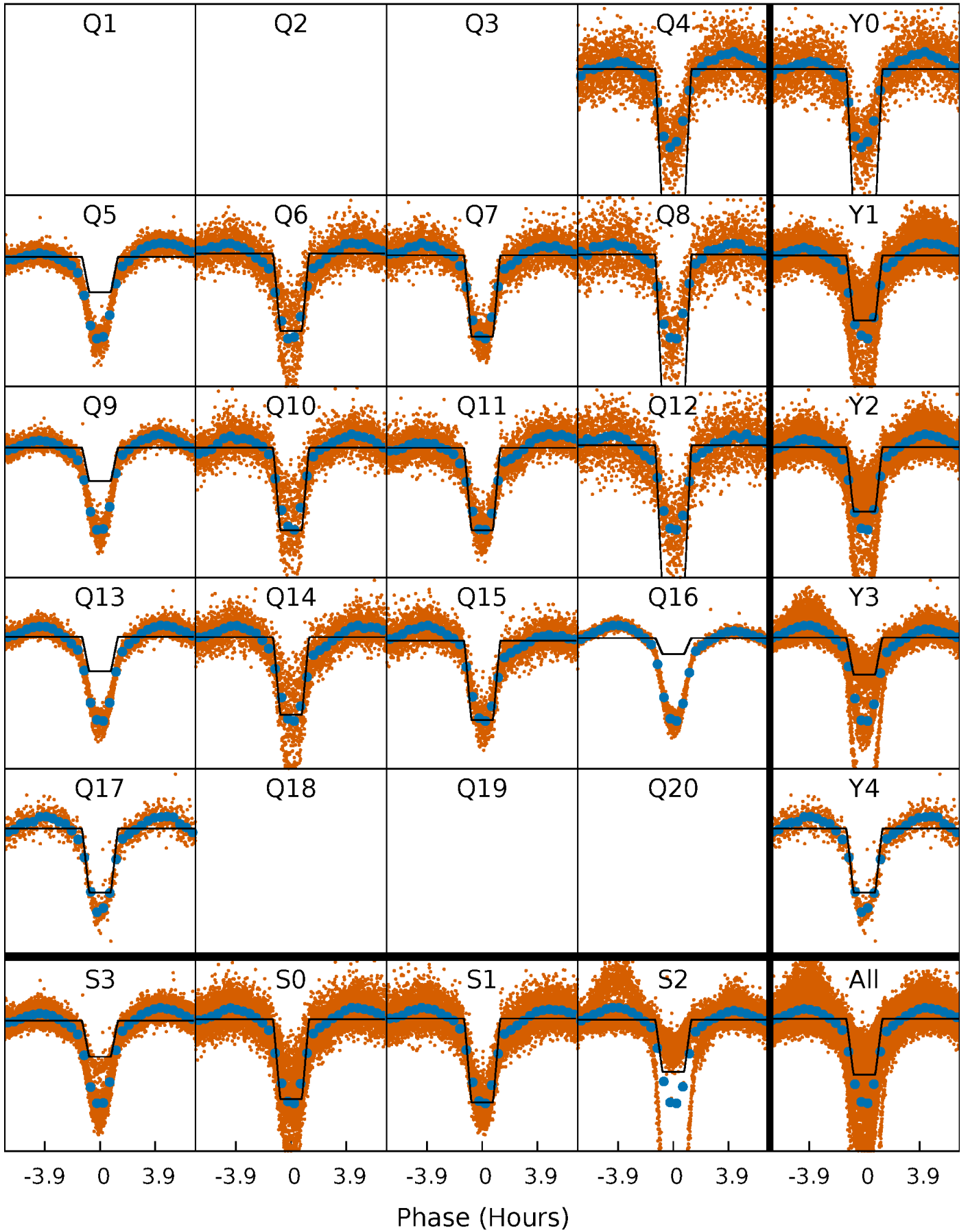
# DV Quarter-Phased Transit Curves

TCE 005479717-01 P= 0.697973 Days  $T_0=132.160681$  (BKJD)



# Alt. Detrend Quarter-Phased Transit Curves

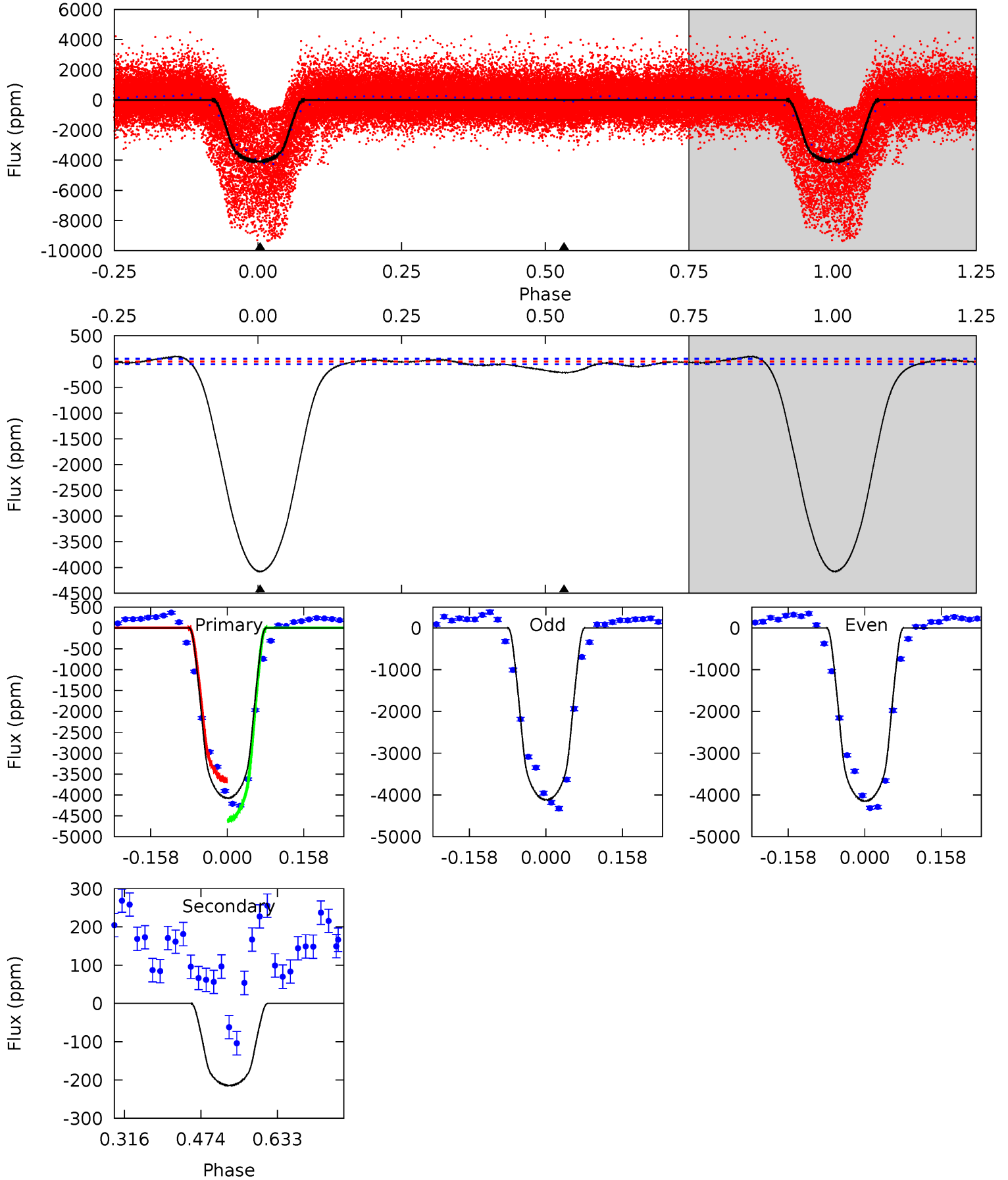
TCE 005479717-01 P= 0.697991 Days  $T_0=132.142899$  (BKJD)



# DV Model-Shift Uniqueness Test

005479717-01, P = 0.697973 Days, E = 132.160681 Days

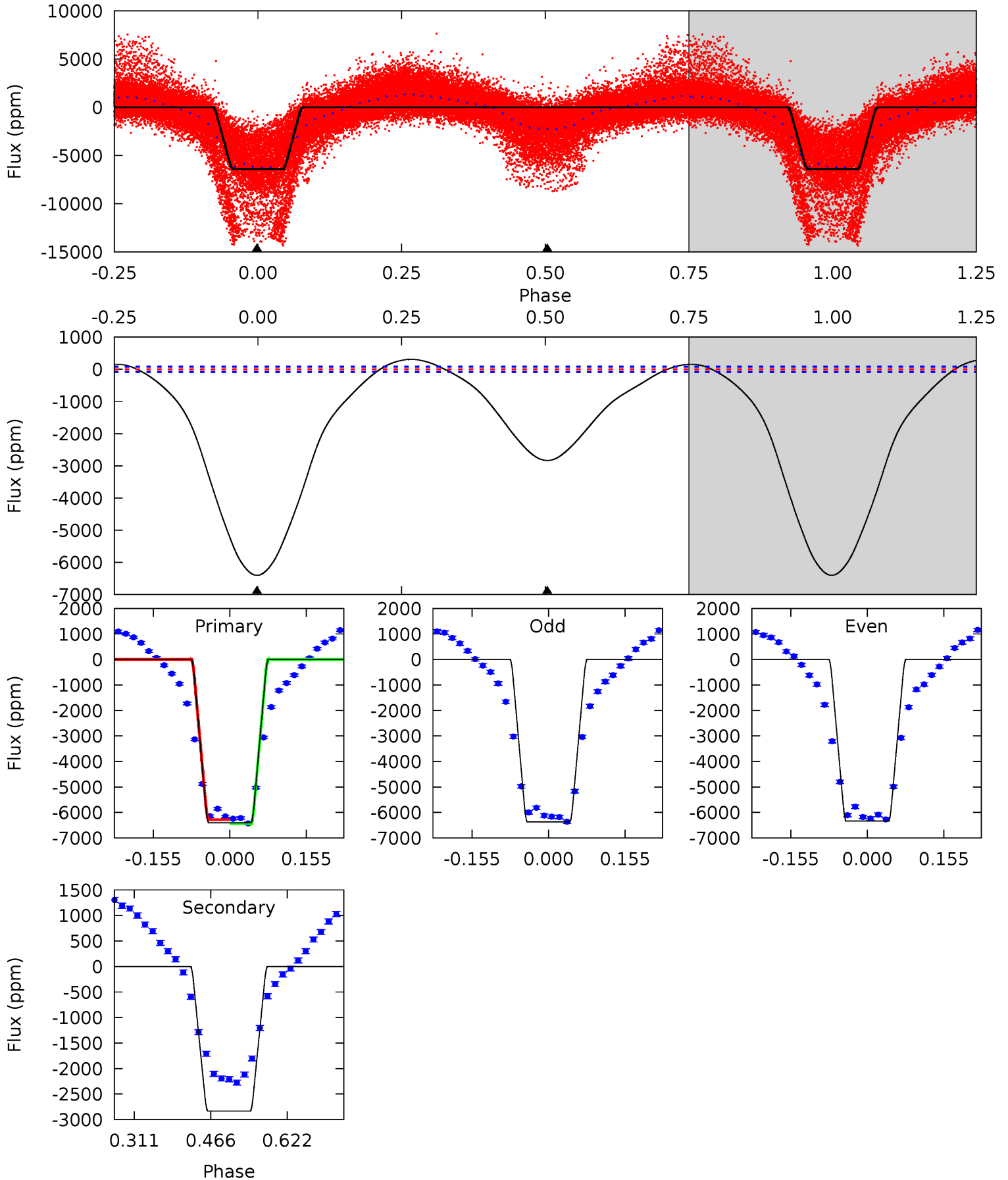
Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
337.5	17.7	0	0	4.47	1.41	2.23	337.5	337.5	17.7	17.7	1.22	1.49	0.02	38.9



# Alt Model-Shift Uniqueness Test

005479717-01, P = 0.697991 Days, E = 132.142899 Days

Pri	Sec	Ter	Pos	FA <sub>1</sub>	FA <sub>2</sub>	F <sub>Red</sub>	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
346.7	153.4	0	0	4.47	1.42	15.9	346.7	346.7	153.4	153.4	1.00	1.39	0.05	4.27



### Stellar Parameters For KIC 005479717

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R$ ( $R_{\odot}$ )	$M(M_{\odot})$	$p_{\star}$ ( $\text{g}\cdot\text{cm}^{-3}$ )
	$5176^{+179}_{-179}$	$4.636^{+0.033}_{-0.083}$	$-0.360^{+0.300}_{-0.300}$	$0.695^{+0.097}_{-0.057}$	$0.768^{+0.073}_{-0.082}$	$3.227^{+0.483}_{-0.898}$
	+3%/-3%	+1%/-2%	+83%/-83%	+14%/-8%	+10%/-11%	+15%/-28%
Source	KIC0	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology  
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

### Secondary Eclipse Parameters for KIC 005479717-01 / KOI 3962.01

Detrend	Depth (ppm)	$R_p$ ( $R_{\oplus}$ )	$T_{max}$ (K)	$T_{obs}$ (K)	$A_{obs}$
DV	$-214 \pm 12$	$4.50^{+0.35}_{-0.30}$	$2261^{+100}_{-90}$	$3028^{+90}_{-95}$	$1.149^{+0.144}_{-0.155}$
Alt.	$-2833 \pm 18$	$6.30^{+0.53}_{-0.39}$	$2269^{+104}_{-100}$	$4317^{+143}_{-141}$	$7.749^{+0.788}_{-0.967}$

$T_{max}$  = Theoretical Maximum Planetary Temperature

$T_{obs}$  = Observed Planetary Temperature (Assuming  $A=0.3$ )

$A_{obs}$  = Observed Albedo (Assuming  $T=0$ )

If a secondary eclipse is present, the system is likely an EB if  $T_{obs} \gg T_{max}$  AND  $A_{obs} \gg 1.0$



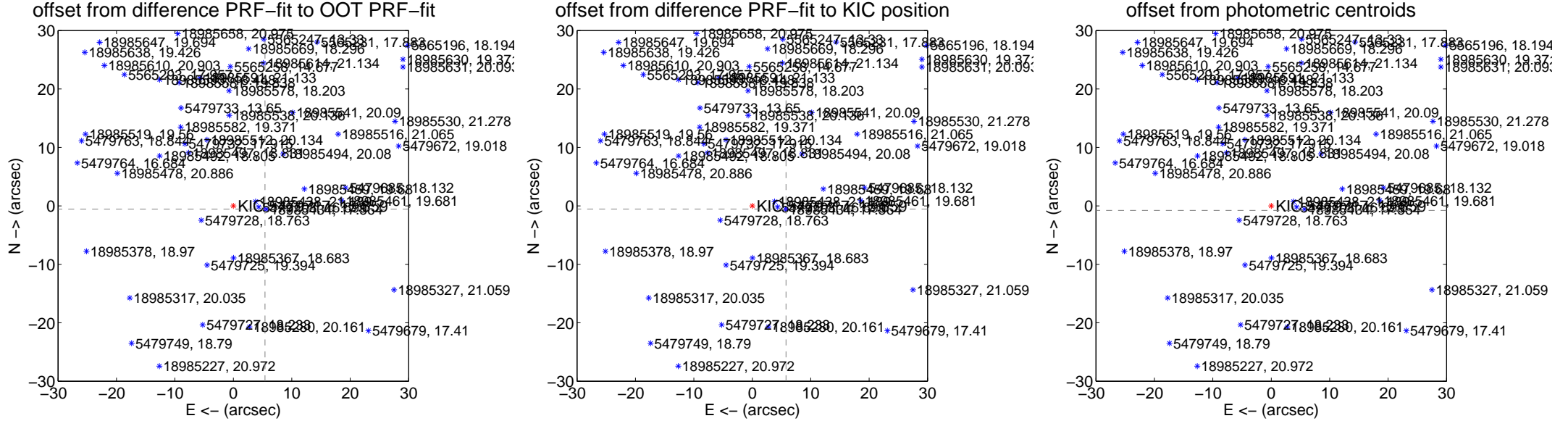
## DV Centroid Data

Supplemental centroid analysis for 005479717-01. Kepler magnitude: 15.86. Transit SNR 154.96

There are 11 quarters with good PRF difference image offsets

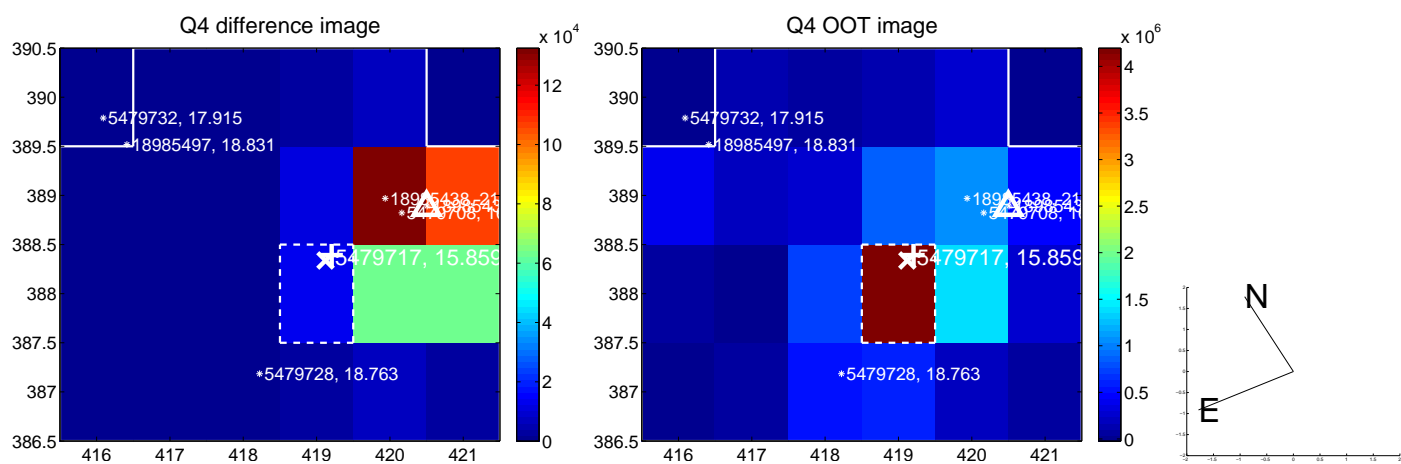
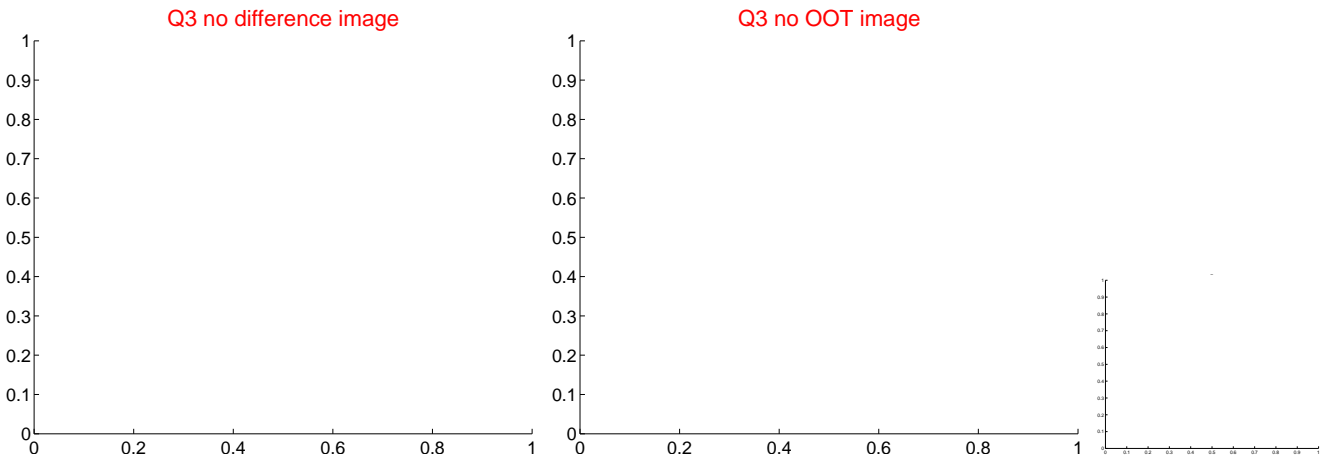
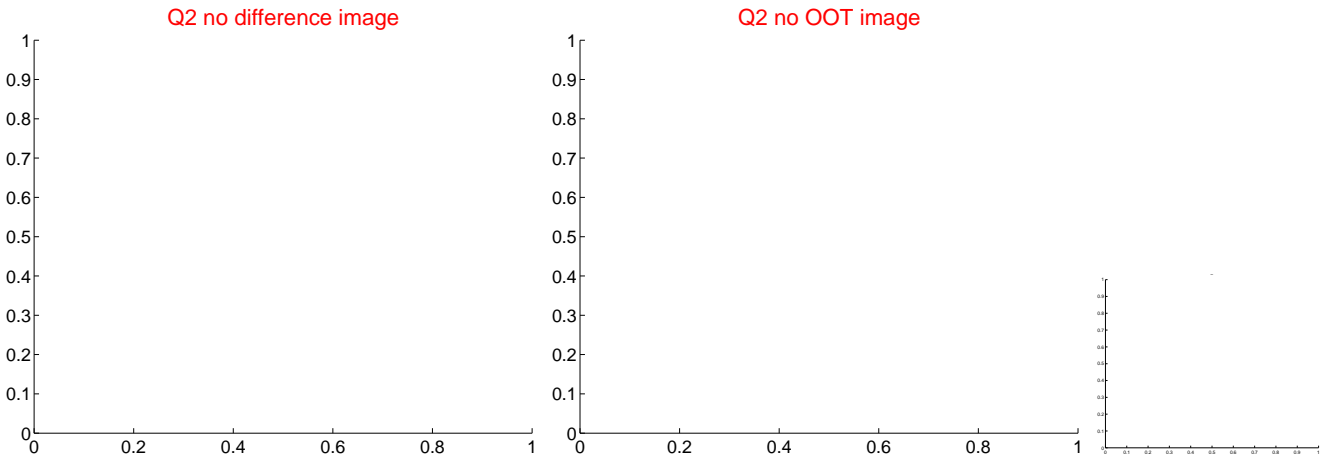
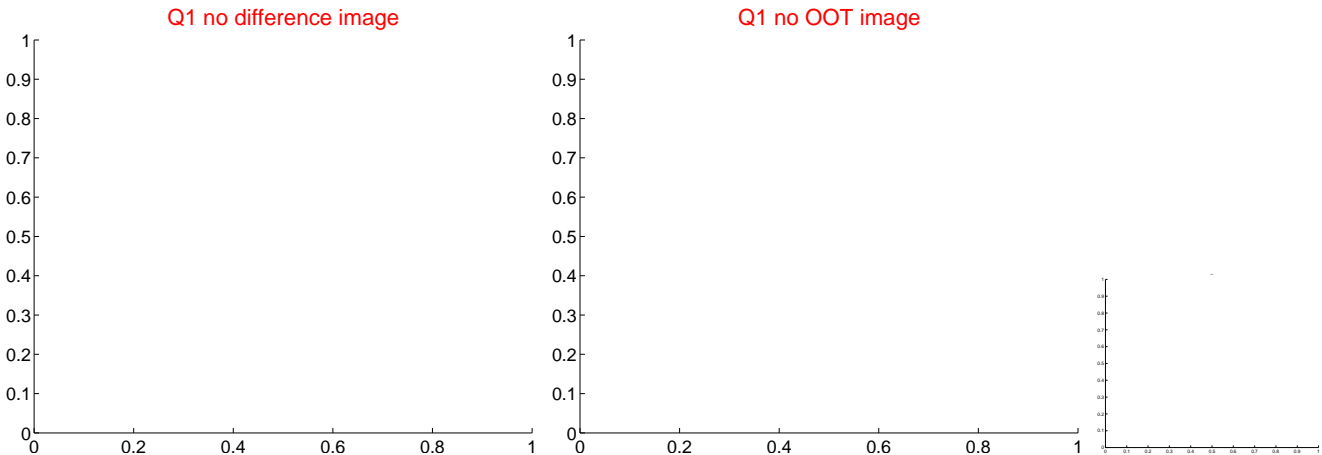
The direct PRF centroid is offset from the target star catalog position by about 0.44 arcsec

	Distance in arcsec	Distance / $\sigma$	$\Delta$ RA	$\Delta$ Dec
PRF-fit source offset from OOT	5.444 $\pm$ 0.068	79.97	-5.415 $\pm$ 0.068	-0.563 $\pm$ 0.069
PRF-fit source offset from KIC position	5.794 $\pm$ 0.069	84.20	-5.768 $\pm$ 0.069	-0.546 $\pm$ 0.068
photometric centroid source offset	36.51 $\pm$ 0.06	565.78	-36.50 $\pm$ 0.06	-0.77 $\pm$ 0.05

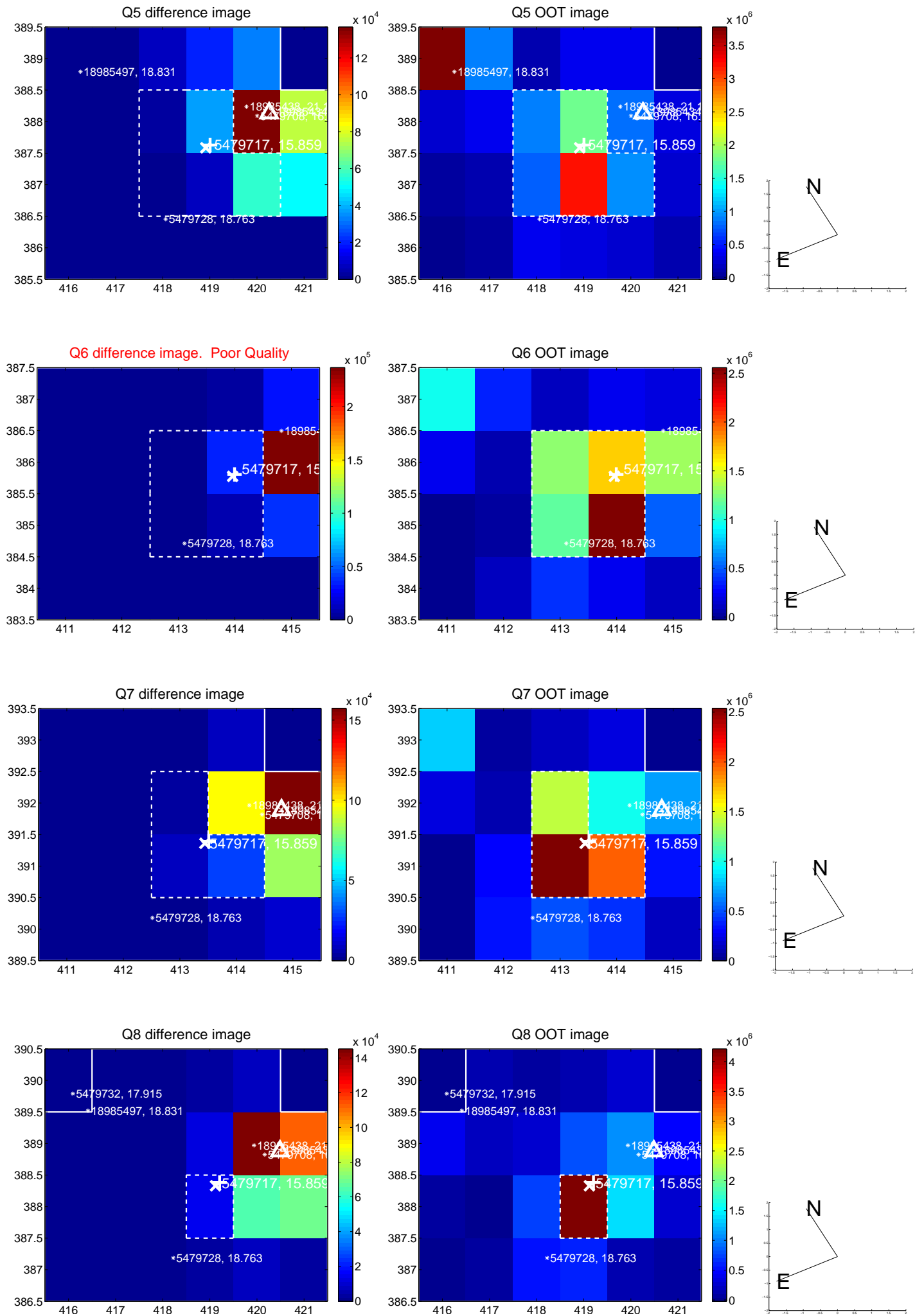


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- $\sigma$  uncertainty. Blue circle: three- $\sigma$ . Red \*: target star. Blue \*: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

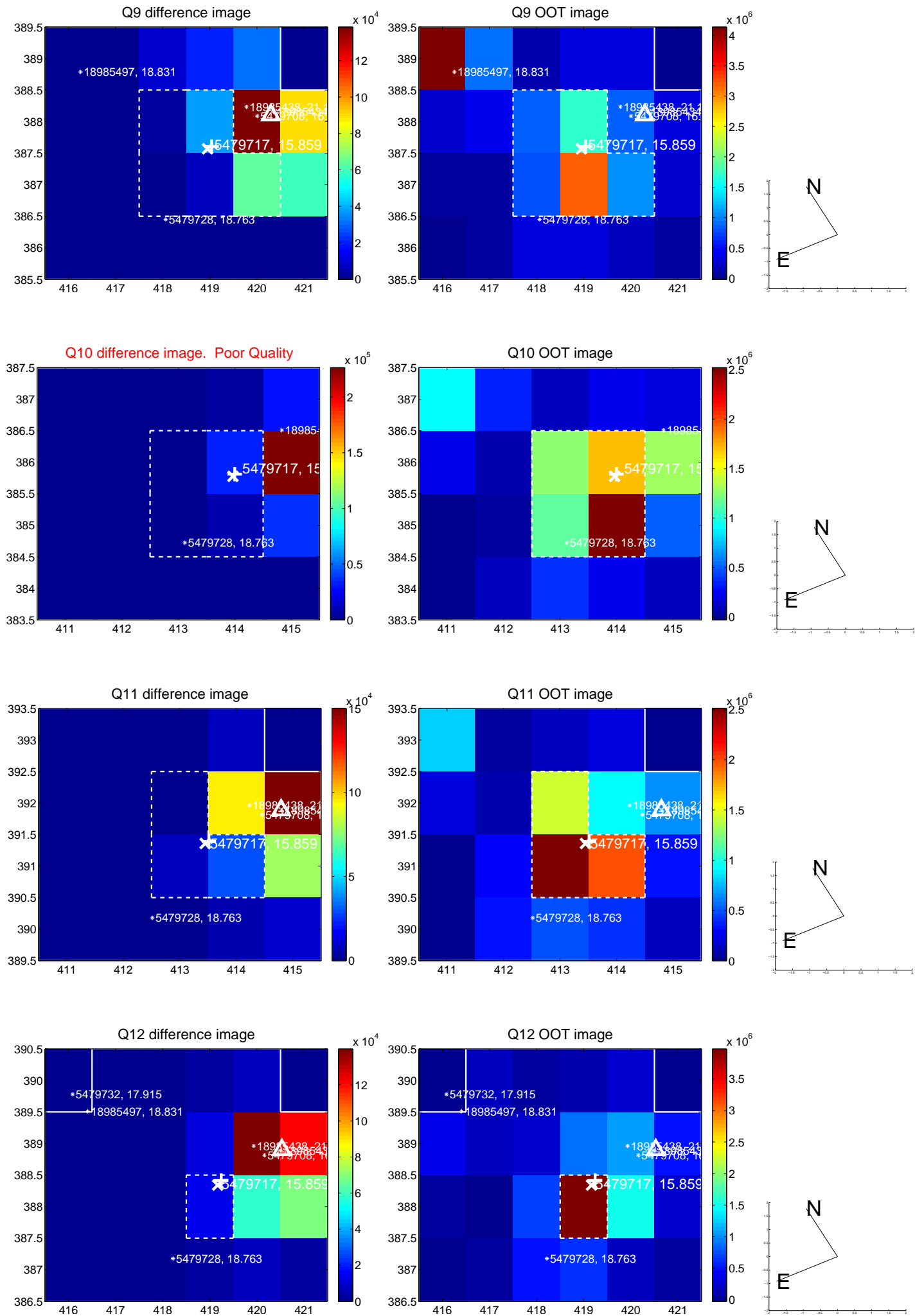
white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value



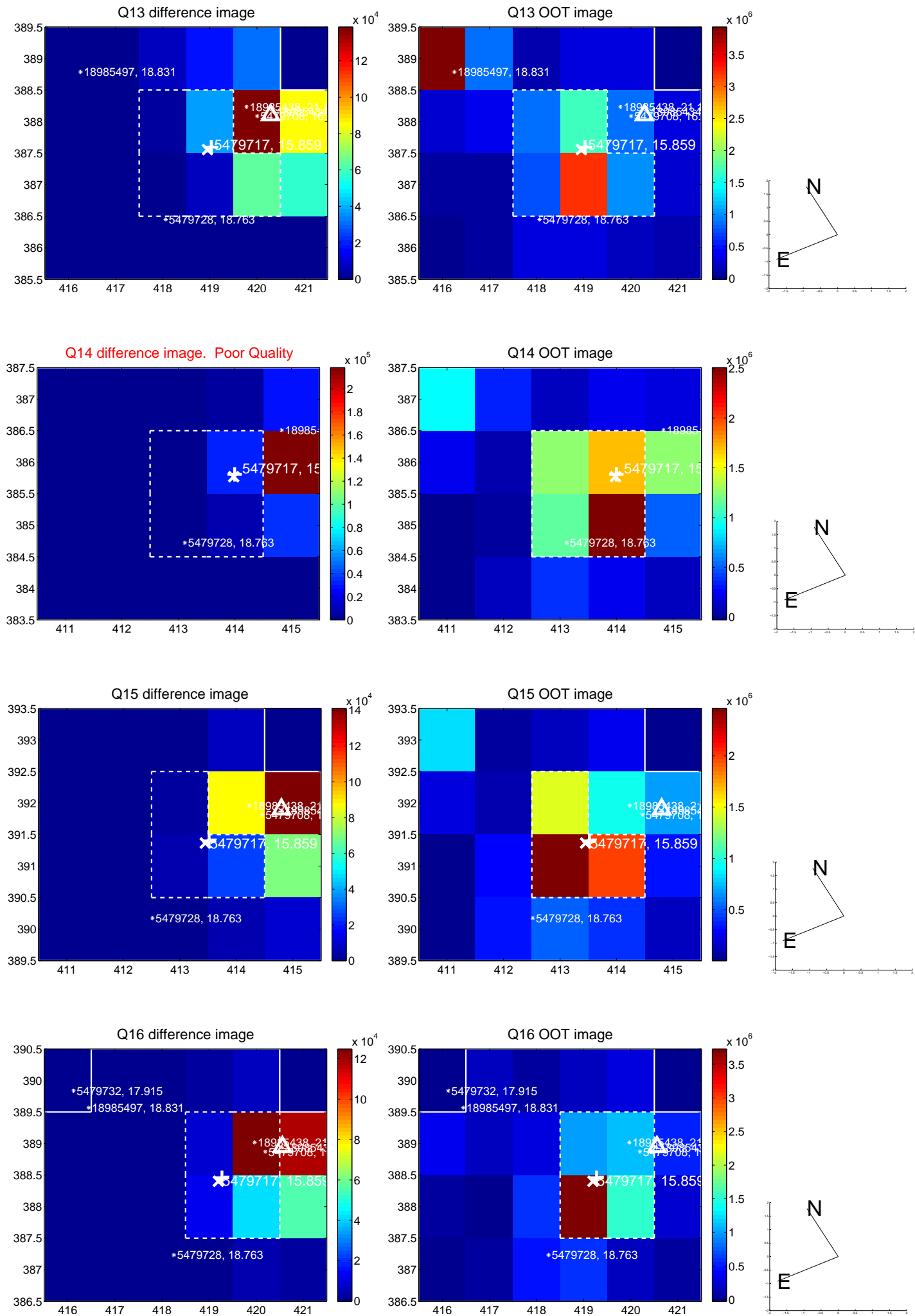
white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.



white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.

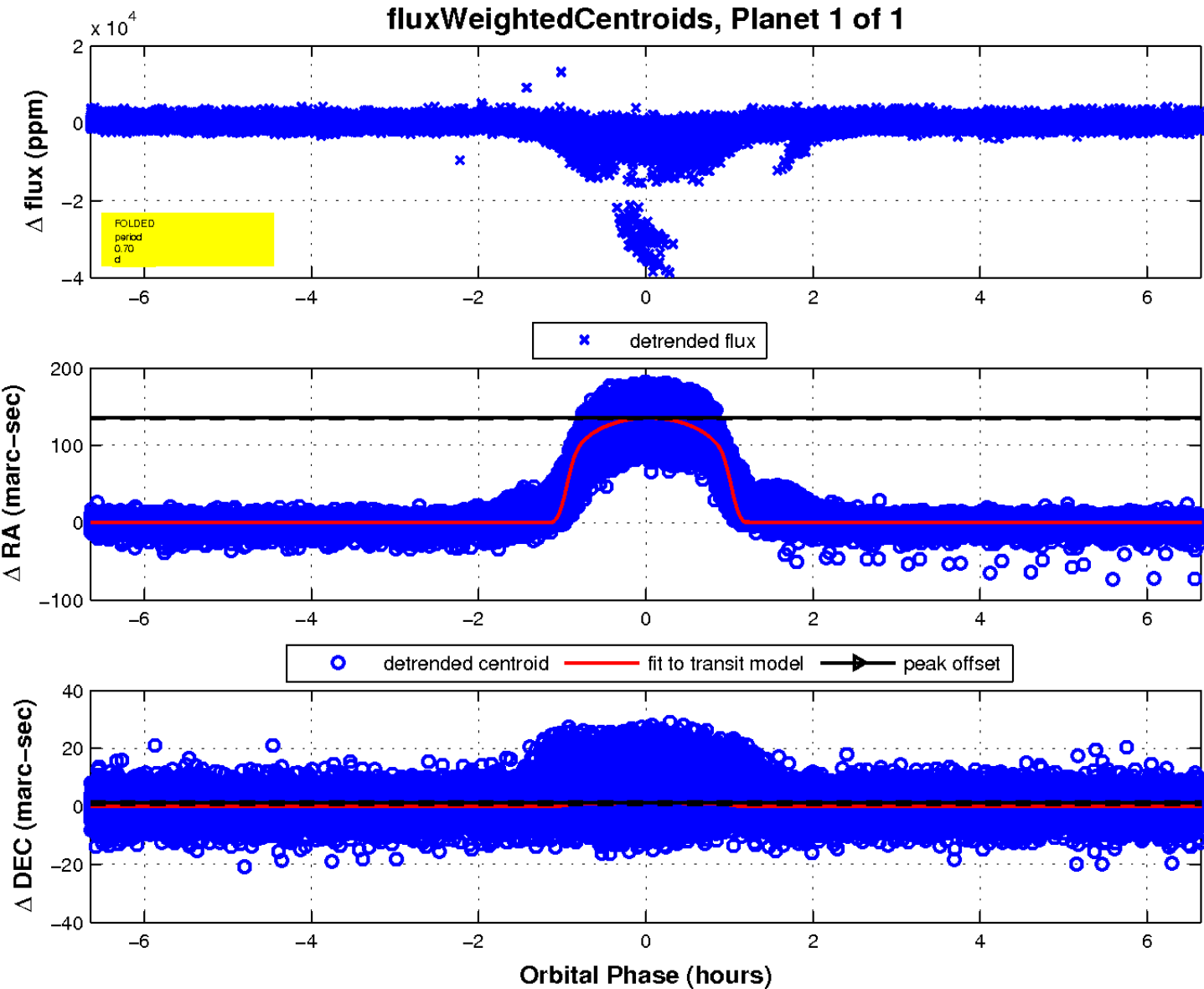
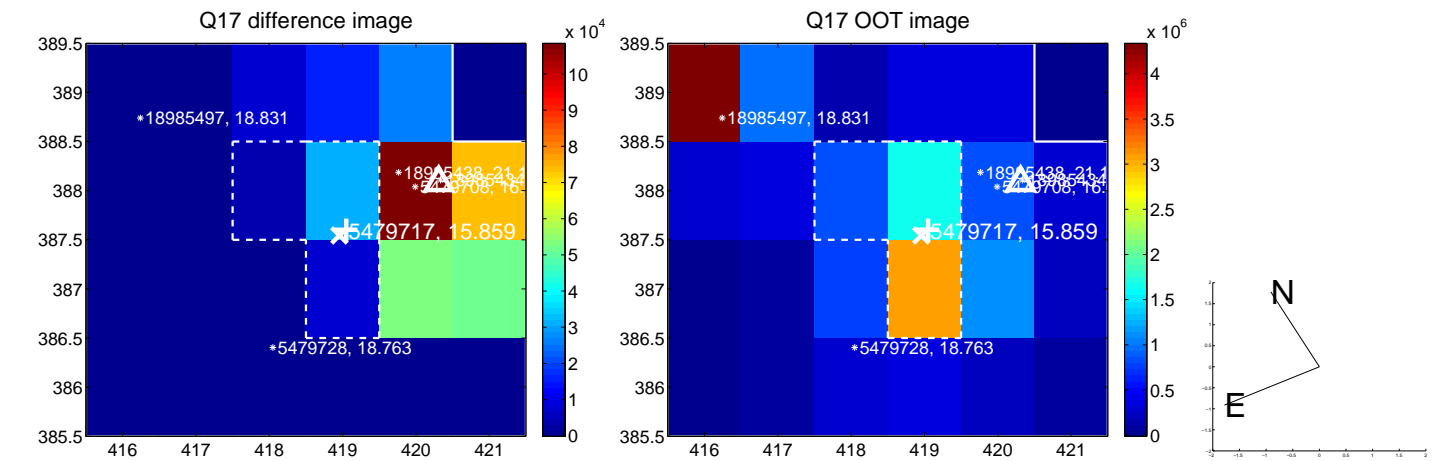


white  $\times$ : KIC target position; +: OOT centroid;  $\triangle$ : difference centroid. red  $\times$ : large negative pixel value.





white  $\times$ : KIC target position;  $+$ : OOT centroid;  $\Delta$ : difference centroid. red  $\times$ : large negative pixel value.



UKIRT Image

Declination

